



# Charting the projections: 1998-2008

For over 50 years, the Bureau of Labor Statistics has developed projections of occupational employment, industry employment, and the labor force. These projections provide information about future employment trends that aid decisionmakers in a variety of activities, including:

- ◆ Career counseling and career choice
- ◆ Training and education planning
- ◆ Policymaking and planning.

The charts in this issue of the *Quarterly* are presented in five sections. An introductory section includes charts showing total employment. Each of the remaining sections focuses on one of four primary components of the projections: Occupational employment, industry employment, economic growth, or labor force. Because of rounding, the sums of numbers do not always equal totals and percent distributions may not equal 100.

## Developing the projections

The Bureau's employment projections are developed in a series of steps. First, the Bureau generates a view of the economy, incorporating projections of the labor force and assumptions about the level of unemployment, exports and imports, consumer spending, and other economic variables. Next, a model is used to project the overall demand for goods and services—the gross domestic product (GDP). Finally, the GDP is translated into industry and occupational employment projections, using models that incorporate assumptions about changes in technology and in employers' staffing patterns and business practices.

Assumptions underlying the projections are supported by historic trends, and none is markedly futuristic or highly speculative. The employment projections developed from the models form the basis of the employment outlook discussions in the *Occupational Outlook Handbook*.

## Charting the projections

The projected growth or decline in an occupation, an industry, the overall economy, or the labor force is expressed in the following charts as either a number, a percent, or both. Numeric growth or decline shows the projected change as a number. Percent change is the difference between the number in the projection year and the number in the reference (or base) year, divided by the number in the base year.

Both percent and numeric change in employment are useful measures of job opportunities. Occupations growing at a fast rate usually have better employment prospects and more favorable conditions for mobility and advancement.

## Highlights of the 1998-2008 projections

The Bureau's projections contain considerable detail about the structure of the economy, the demographic makeup of the labor force, and changes in employment in more than 500 occupations and 260 industries. Most projections are continuations of long-term trends. The following are of special significance.

### Introduction: Employment projections

- ◆ Employment is projected to grow 20 million, about the same as over the previous decade. However, the growth rate will be lower—14 percent over the projections period compared to 17 percent in the earlier period.

### Occupational employment

- ◆ Employment is projected to grow in occupations in every education and training category. On average, jobs usually requiring an associate degree or more will grow faster than average; most numeric growth in employment, however, will be in occupations requiring less education than an associate degree. Of the 20 *fastest growing* occupations, 12 usually require an associate degree or more education. Of the 20 occupations with the *largest numerical growth* in employment, 6 usually require an associate degree or more education, 2 require related work experience, and 12 require short-term on-the-job training.
- ◆ Of the 20 occupations projected to be the fastest growing, 8 are health-related and 8 are computer-related, including the 5 fastest growing occupations. Growth in these occupations will be driven by the rapidly growing health and computer services industries, which employ large numbers of these workers. And computer-related occupations are expected to grow faster than other occupations in nearly all industries.

### Industry employment

- ◆ Industry employment growth will be concentrated in the service-producing sector of the economy. The services and retail trade industry divisions within this sector will account for about 75 percent of the growth.
- ◆ Services is the only industry division in which employment is projected to grow faster than average. Within services, three industry groups will account for nearly half of all nonfarm wage and salary growth in the economy: Business services, which includes computer and data processing services and personnel supply services; health services; and engineering, management, and other services.

- ◆ In the goods-producing sector, employment will grow in construction but will decline in manufacturing and mining. Employment in manufacturing, the largest division, will decrease from 15 to 13 percent of nonfarm wage and salary workers.

### Economic growth

- ◆ Gross domestic product (GDP), which measures the output of all goods and services in the economy, will grow by an annual average rate of 2.4 percent—slightly slower than the previous decade.
- ◆ Employment of workers producing this output will grow by an annual average rate of 1.4 percent, implying a significant increase in output per worker.
- ◆ International trade will become a more important part of the U.S. economy as both exports and imports increase their share of GDP through 2008.
- ◆ Purchases by consumers will grow about as fast as overall GDP and will continue to account for 68 percent of all economic activity.

### Labor force

- ◆ The labor force will grow by 17 million workers over the 1998-2008 period, compared to 16 million over the previous decade. The growth rate of 12 percent will be about the same as during the 1988-98 period.
- ◆ As the “baby-boom” generation ages, the age distribution of the labor force will change. By 2008, nearly all baby boomers—those born between 1946 and 1964—will be age 45 or over; these workers will increase their share of the labor force from 33 to 40 percent. The age groups that include the post baby-boom generation—25- to 34-year-olds and 35- to 44-year-olds—will together decrease from 51 to 44 percent. And the 16- to 24-year-olds age group, which includes children of baby boomers, will remain at 16 percent.
- ◆ The number of Hispanics and Asians and others in the labor force will continue to increase much faster than that of black non-Hispanics and white non-Hispanics. Whites, however, will still account for the majority—71 percent—of workers in 2008.
- ◆ The labor force participation rate will continue to increase for women while decreasing for men. As a result, women's share of the labor force will reach 48 percent by 2008.



## Other Bureau publications presenting information on the 1998-2008 projections

This issue of the *Quarterly* is one in a series of Bureau publications presenting projections data. The others provide more detail or approach the projections from another point of view.

- ◆ The November 1999 issue of the *Monthly Labor Review* contains five articles related to the projections. The first article summarizes the Bureau's 1998-2008 projections and is followed by four more detailed articles, each of which includes statistical tables and focuses on one major component: Labor force, economic growth, industry employment, or occupational employment.
- ◆ The 2000-01 edition of the *Occupational Outlook Handbook* (Bulletin 2520) assesses job prospects for about 250 occupations or occupational groupings that cover 7 of every 8 jobs in the Nation. For each, it also discusses work activities, working conditions, earnings, and the types of education, training, and personal qualifications needed for people to enter and succeed in the occupation.
- ◆ The 2000-01 edition of the *Career Guide to Industries* (Bulletin 2523) presents occupational information from an industry perspective. It provides details on the nature of the industry, employment, working conditions, occupations in the industry, training and advancement, earnings, and job outlook for 40 industries.
- ◆ *Occupational Projections and Training Data* (Bulletin 2521), the statistical supplement to the *Occupational Outlook Handbook*, is designed for use in educational planning, career development, and counseling. In addition to statistical tables presenting occupational employment change for the 1998-2008 period, it includes estimates of job openings stemming from the need to replace workers who leave an occupation. It also presents data on recent completions of education and

training programs by field of training. The publication ranks more than 500 occupations by employment growth, annual job openings due to growth and replacement, earnings, and unemployment rate.

- ◆ *Employment Outlook 1998-2008* (Bulletin 2522) presents highlights of the Bureau's projections, focusing on occupations' education and training requirements and job quality as measured by earnings. It also presents detailed statistical tables for the major components of the projections.
- ◆ "The Job Outlook in Brief" focuses on the occupations covered in the *Occupational Outlook Handbook*. It presents 1998 employment data and a short description of prospective employment trends and job competition. It will appear in the spring 2000 *Quarterly* and will be reprinted and sold by the U.S. Government Printing Office and the U.S. General Services Administration's Consumer Information Center.
- ◆ "The Job Outlook for College Graduates" will appear in the summer 2000 *Quarterly*. It will discuss the supply and demand situation for college graduates for the 1998-2008 period.

Subscriptions to the *Quarterly* are \$19 for 2 years and \$9.50 for 1 year; single copies are \$4. Subscriptions to the *Monthly Labor Review* are \$27 annually or \$8.50 per issue. The price of the other publications discussed above had not been determined at press time. Once the publications are in print, price and ordering information will be available from the Chicago Regional Office of the Bureau of Labor Statistics, (312) 353-1880. Most of the publications will be available online; you may also find price and ordering information at the Office of Employment Projections website: <http://stats.bls.gov/emphome.htm>.